

REMARKS

In the above-referenced Office Action, the Examiner divided the claims into the following groups:

- I. Claims 16-20 and 42-44, drawn to a method of characterizing spectral emissions;
- II. Claims 49-56, drawn to non-statutory subject matter because they claim a signal as invention; and
- III. Claims 45-48 and 57-60, drawn to a SQUID testing apparatus for a sample and a computer readable medium for use with such apparatus.

In response, the applicants elect Group III without traverse. Non-elected claims have been canceled, claims 45 and 57 amended, and new claims 61-68 added. The claim amendment and new claims add, e.g., recitation of a second derivative gradiometer detector, superconducting shielding, and an adjustable field gradient. Support for the amendments and new claims may be found, e.g. in the claims of the parent PCT application. Further, support for the second derivative gradiometer detector may be found, e.g., in paragraph [0094] of the PCT application and prior claim 30; support for the superconducting shielding may be found, e.g., in prior claim 29; and support for the adjustable field gradient may be found, e.g., in paragraph [0137].

In an effort to help expedite prosecution, attorneys of the applicants wish to provide the following remarks to help clarify aspects of the present claims and references previously cited in parent applications (now U.S. Patent Nos. 6,724,188 and 6,995,558). Office actions in prior applications have cited, e.g. U.S. Pat. Nos. 7,218,104 to Sager et al and 6,084,399 to Nagaishi et al. Neither Sager nor Nagaishi disclose, e.g., second derivative gradiometer detector, superconducting shielding, and an adjustable field gradient, all of which improve performance of the applicants' system in

terms of generating useful signals. In other words, these three elements contribute to improve the system's signal to noise performance.

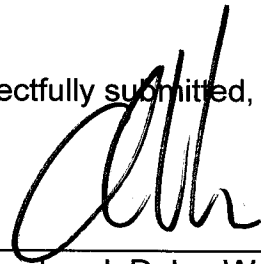
Some claims further recite generation and display of signals; neither Sager nor Nagaishi provide relevant details on any user interface, which is helpful in signal analysis once signals are detected. Sager and Nagaishi simply disclose signal detectors and no more.

The present claims are believed to be patentably distinct from the applicants' existing patents, including U.S. Patent Nos. 6,724,188 and 6,995,558. However, if a terminal disclaimer is needed, please call the undersigned attorney. Indeed, if any matter can be expediently handled by phone, please fee free to call.

Please charge any deficiency in fees or credit any overpayment to our Deposit Account No. 50-2207, under Order No. 385478008US2 from which the undersigned is authorized to draw.

Dated: February 12, 2008

Respectfully submitted,

By 
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